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NOMENCLATURAL STATUS OF UNRANKED NAMES PUBLISHED BY TRELEASE (1911) IN *BEAUCARNEA*, *DASYLIRION*, AND *NOLINA* (ASPARAGACEAE-NOLINOIDEAE)

JOACHIM THIEDE
Schenefelder Holt 3
22589 Hamburg, Germany
joachim_thiede@gmx.de

ABSTRACT

The nomenclatural status of eight infrageneric and five infraspecific names published by Trelease (1911) in *Beaucarnea* Lem., *Dasylirion* Zucc., and *Nolina* Michx. (Asparagaceae-Nolinoideae) is evaluated. Nearly all later authors treated these names as if they were published at sectional or varietal rank, but they were in fact published without rank assignment. For all names except one, new combinations at sectional or varietal rank were subsequently published by Trelease himself or later authors; these combinations are listed. Typifications for infrageneric names are provided. For one infrageneric name without combination at sectional rank, the new combination **Beaucarnea sect. Papillatae** (Trel.) Thiede is proposed.

KEY WORDS: Asparagaceae, *Beaucarnea*, *Dasylirion*, infrageneric classification, new combination, *Nolina*, Nolinaceae, nomenclature, unranked names.

In his treatment of "The desert group Nolineae", Trelease (1911) published new infrageneric names in *Beaucarnea* Lem., *Dasylirion* Zucc., and *Nolina* Michx. as well as new infraspecific names in *Dasylirion* and *Nolina*. Trelease gave a short characterization for all names but did not apply any formal rank to them, so that all names are unranked: e.g., *Beaucarnea* [unranked] *Papillatae* Trel. or *Nolina palmeri* [unranked] *brandegeei* Trel. With the sole exception of Ullrich (1992), virtually all other authors (e.g., Krause 1930; Bogler 1998; Walker 2001; Hess 2002; Hochstätter 2010, 2011; IPNI 2012; Govaerts & al. 2012) wrongly treated Trelease's names as being published at sectional or varietal rank as, e.g., *Beaucarnea* sect. *Papillatae* Trel. or *Nolina palmeri* var. *brandegeei* Trel.

Three of Trelease's infrageneric names are invalid according to the autonym rule (see below), whereas all other infrageneric and all infraspecific names are valid but inoperative in questions of priority (Art. 35.3 ICBN, McNeill & al. 2006). Trelease himself and later authors (see below) published new combinations at sectional or varietal rank for all names except one, for which a new combination is proposed here.

In the following, the nomenclatural status of all unranked infrageneric and infraspecific names published by Trelease (1911) in *Beaucarnea*, *Dasylirion*, and *Nolina* is evaluated, the new combinations based on these names are enumerated, and typifications for all infrageneric names are provided.

BEAUCARNEA Lem., Ill. Hort. 8: Misc. 59. 1861). **TYPE**: *Beaucarnea recurvata* Lem.

Trelease (1911) classified the genus into *Beaucarnea* [unranked] *Eubeaucarnea* Trel. (*nom. inval.*) and *Beaucarnea* [unranked] *Papillatae* Trel. For the latter, no combination at infrageneric level was found, so that a new combination at sectional rank is proposed here following ICBN Art. 35.3 & Ex. 4 (McNeill & al. 2006).

Beaucarnea sect. **Beaucarnea**. **TYPE**: *Beaucarnea recurvata* Lem. (= type of *Beaucarnea*). ≡ *Beaucarnea* [unranked] *Eubeaucarnea* Trel., Proc. Amer. Phil. Soc. 50: 427. 1911 (*nom. inval.*, ICBN Arts. 21.3, 22.1 & 22.2; McNeill & al., 2006). **TYPE**: [not indicated].

Further species: *B. goldmanii* Rose, *B. guatemalensis* Rose, *B. pliabilis* (Baker) Rose, *B. sanctomariana* L. Hern.

Beaucarnea sect. **Papillatae** (Trel.) Thiede, **comb. nov.** **LECTOTYPE** (selected here): *Beaucarnea stricta* Lem. ≡ *Beaucarnea* [unranked] *Papillatae* Trel., Proc. Amer. Phil. Soc. 50: 429. 1911. **TYPE**: [not indicated].

Further species: *B. compacta* L. Hern. & Zamudio, *B. gracilis* Lem., *B. hiriartiae* L. Hern.

Hernández-Sandoval (1993, cited in Bogler 1998) suggested that these two sections may not be clearly distinguished.

DASYLIRION Zucc., Allg. Gartenzeitung (Otto & Dietrich) 6: 258. 1838. **TYPE**: *Dasylirion graminifolium* (Zucc.) Zucc.

Trelease (1911) classified the genus into *Dasylirion* [unranked] *Eudasylirion* Trel. (*nom. inval.*) and *Dasylirion* [unranked] *Quadrangulatae* Trel. In his treatment of the Liliaceae, Krause (1930) cited "*Dasylirion* Sekt. II *Quadrangulatae* Trelease" with full reference including page number from Trelease (1911) which is treated here as valid, albeit unintended, new combination. In his synopsis of *Dasylirion*, Hochstätter (2011) published an additional sect. *Glaucophyllum*, which accommodates some of the species previously placed in sect. *Dasylirion*.

Dasylirion sect. **Dasylirion**. **TYPE**: *Dasylirion graminifolium* (Zucc.) Zucc. (= type of *Dasylirion*). ≡ *Dasylirion* [unranked] *Eudasylirion* Trel., Proc. Amer. Phil. Soc. 50: 431. 1911 (*nom. inval.*, ICBN Arts. 21.3, 22.1 & 22.2; McNeill & al. 2006). **TYPE**: [not indicated].

Further species: *D. acrotrichum* (Schiede) Zucc., *D. gentryi* Bogler, *D. leiophyllum* Engelm. ex Trel., *D. lucidum* Rose, *D. parryanum* Trel., *D. serratifolium* (Karw. ex Schult. & Schult. f.) Zucc., *D. simplex* Trel., *D. texanum* Scheele.

Dasylirion sect. **Quadrangulatae** (Trel.) K. Krause in H.G.A. Engler, Nat. Pflanzenfam. ed. 2, 15a: 356. 1930 [repeated by Ullrich in Kakt. and. Sukk. 43(8): centre page pull-out 1992/25. 1992]. ≡ *Dasylirion* [unranked] *Quadrangulatae* Trel., Proc. Amer. Phil. Soc. 50: 440. 1911. **TYPE**: *Dasylirion longissimum* Lem. (typification by inference; only species included).

Further species: *D. miquihuanense* Bogler, *D. quadrangulatum* S. Watson, *D. treleasei* (Bogler) Hochstätter.

Dasylirion sect. **Glaucophyllum** Hochstätter, Piante Grasse 31(1): 28. 2011. **TYPE**: *Dasylirion glaucophyllum* Hook.

Further species: *D. berlandieri* S. Watson, *D. cedrosanum* Trel., *D. durangense* Trel., *D. longistylum* J.F. Macbr., *D. occidentalis* Bogler ex Hochstätter, *D. palaciosii* Rzed., *D. sereke* Bogler, *D. wheeleri* S. Watson ex Rothr.

NOLINA Michx., Fl. Bor.-Amer. 1: 207. 1803. **TYPE**: *Nolina georgiana* Michx.

Trelease (1911) classified the genus into *Nolina* [unranked] *Graminifoliae* Trel. (*nom. inval.*), *N.* [unranked] *Erumpentes* Trel., *N.* [unranked] *Microcarpae* Trel. and *N.* [unranked] *Arborescentes* Trel.

In a synopsis of *Nolina*, Hochstätter (2010) cited these names as being published at sectional rank. Since Hochstätter also cited the full reference including page number from Trelease (1911), Hochstätter's sectional names are treated here as valid, albeit unintended, new combinations.

Nolina sect. **Nolina**. **TYPE**: *Nolina georgiana* Michx. (= type of *Nolina*). ≡ *Nolina* [unranked] *Graminifoliae* Trel., Proc. Amer. Phil. Soc. 50: 413. 1911 (*nom. inval.*, ICBN Art. 22.1; McNeill & al. 2006). **TYPE**: [not indicated].

Further species: *N. atopocarpa* Bartlett, *N. brittoniana* Nash, *N. humilis* S. Watson, *N. lindheimeriana* (Scheele) S. Watson, *N. pumila* Rose.

Nolina sect. **Erumpentes** (Trel.) Hochstätter, Piante Grasse 30(Suppl.): 14. 2010. **TYPE**: *Nolina erumpens* (Torr.) S. Watson. ≡ *Nolina* [unranked] *Erumpentes* Trel., Proc. Amer. Phil. Soc. 50: 416. 1911. **TYPE**: [not indicated].

Further species: *N. arenicola* Correll, *N. cespitifera* Trel., *N. greenei* S. Watson ex Wooton & Standl., *N. micrantha* I.M. Johnst., *N. texana* S. Watson.

Nolina sect. **Microcarpae** (Trel.) Hochstätter, Piante Grasse 30(Suppl.): 23. 2010. **TYPE**: *Nolina microcarpa* S. Watson. ≡ *Nolina* [unranked] *Microcarpae* Trel., Proc. Amer. Phil. Soc. 50: 420. 1911. **TYPE**: [not indicated].

Further species: *N. durangensis* Trel., *N. elegans* Rose, *N. palmeri* S. Watson, *N. rigida* Trel.

Hochstätter (2010: 2) considered *Nolina rigida* as an unclear species.

Nolina sect. **Arborescentes** (Trel.) Hochstätter, Piante Grasse 30(Suppl.): 29. 2010. **LECTOTYPE** (selected here): *N. longifolia* (Karw. ex Schult. & Schult. f.) Hemsl. ≡ *Nolina* [unranked] *Arborescentes* Trel., Proc. Amer. Phil. Soc. 50: 422. 1911. **TYPE**: [not indicated].

Further species: *N. azureogladiata* D. Donati, *N. beldingii* Brandegee, *N. bigelovii* (Torr.) S. Watson, *N. cismontana* Dice, *N. hibernica* Hochstätter & D. Donati, *N. interrata* Gentry, *N. juncea* (Zucc.) J.F. Macbr., *N. matapensis* Wiggins, *N. nelsonii* Rose, *N. parryi* S. Watson; *N. parviflora* (Kunth) Hemsl.

Hochstätter (2010: 2) considered *Nolina juncea* as an unclear species.

UNRANKED INFRASPECIFIC NAMES

Trelease (1911) published 2 unranked infraspecific names in *Dasylirion* and 3 in *Nolina*. In an excerpt published the following year (Trelease 1912), Trelease assigned varietal rank to these names which are treated here as valid new combinations.

Dasylirion texanum var. ***aberrans*** (Trel.) Trel., Feddes Repert. 11: 52. 1912. ≡ *D. texanum* [unranked] *aberrans* Trel., Proc. Amer. Philos. Soc. 50: 434. 1911. Accepted name: *D. texanum* Scheele (Hochstätter 2011, Govaerts & al. 2012).

Dasylirion wheeleri var. ***wislizenii*** (Trel.) Trel., Feddes Repert. 11: 53. 1912. ≡ *D. wheeleri* [unranked] *wislizenii* Trel., Proc. Amer. Philos. Soc. 50: 439. 1911. Accepted name: *D. wheeleri* S. Watson ex Rothr. (Walker 2001, Hochstätter 2011, Govaerts & al. 2012).

Nolina palmeri var. ***brandegeei*** (Trel.) Trel., Feddes Repert. 11: 50. 1912. ≡ *N. palmeri* [unranked] *brandegeei* Trel., Proc. Amer. Philos. Soc. 50: 420. 1911. Accepted name: *N. palmeri* S. Watson (Hochstätter 2010, Govaerts & al. 2012).

Nolina beldingii var. ***deserticola*** (Trel.) Trel., Feddes Repert. 11: 50. 1912. ≡ *N. beldingii* [unranked] *deserticola* Trel., Proc. Amer. Philos. Soc. 50: 424. 1911. Accepted name: *N. beldingii* Brandegee (Hochstätter 2010, Govaerts & al. 2012).

Nolina texana var. ***compacta*** (Trel.) I.M. Johnst., J. Arnold Arbor. 24: 90. 1943. ≡ *N. erumpens* var. *compacta* (Trel.) Trel., Feddes Repert. 11: 49. 1912. ≡ *N. erumpens* [unranked] *compacta* Trel., Proc. Amer. Philos. Soc. 50: 418. 1911. Accepted name: *N. texana* S. Watson (Hess 2002, Hochstätter 2010, Govaerts & al. 2012).

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LITERATURE CITED

Bogler, D.J. 1998. Nolinaceae. Pp. 392–397, *in* K. Kubitzki & al. (eds.). Families and Genera of Vascular Plants. III. Flowering Plants. Monocotyledons. Lilianae (except Orchidaceae). Springer, Wien.

Govaerts, R., B.J.M. Zonneveld, and S.A. Zona. 2012. World Checklist of Asparagaceae. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet at http://apps.kew.org/wcsp/. Accessed 5 Jun 2012.

Hernández-Sandoval, L.G. 1993. Cladistic analysis of the American genera of Asparagales and the systematic study of *Beaucarnea* (Nolinaceae) and the taxonomic revision of *Hemiphylacus* (Hyacinthaceae). Ph.D. dissertation, Univ. of Texas, Austin.

Hess, W.J. 2002. *Nolina.* Pp. 413–421, *in* Flora of North America Editorial Committee (ed.). Vol. 26. Magnoliophyta: Liliidae: Liliales and Orchidales. Oxford Univ. Press, New York.

Hochstätter, F. 2010. Il genere / the genus *Nolina* (Nolinaceae). Piante Grasse 30(Suppl. al n° 1): 1–50.

Hochstätter, F. 2011. *Dasylirion* Zucc. (Nolinaceae) Revisione del genere / Revision of the genus. 1–3. Piante Grasse 31(1): 21–26, (3): 106–122, (4): 147, 162–181.

IPNI. 2012. The International Plant Names Index. Published on the Internet at http://www.ipni.org. Accessed 5 Jun 2012.

Krause, K. 1930. *Dasylirion.* Pp. 355–356, *in* A. Engler (ed.). Die natürlichen Pflanzenfamilien, ed. 2, 15a. W. Engelmann, Leipzig,

McNeill, J., F.M. Barrie, H.M. Burdet, V. Demoulin, D.L. Hawksworth, K. Marhold, D.H. Nicolson, J. Prado, P.C. Silva, J.E. Skog, J.H. Wiersema, and N.J. Turland (eds.). 2006. International Code of Botanical Nomenclature (Vienna Code) adopted by the Seventeenth International Botanical Congress Vienna, Austria, July 2005. Gantner Verlag, Ruggell.

Trelease, W. 1911. The desert group Nolineae. Proc. Amer. Philos. Soc. 50: 404–443 + pls. i–xvii.

Trelease, W. 1912. Nolineae novae. Feddes Repert. 11: 49–53.

Ullrich, B. 1992. *Dasylirion longissimum* Lemaire (Nolinaceae). Kakt. and. Sukk. 43: centre page pullout 1992/25.

Walker, C.C. 2001. Nolinaceae. Pp. 286–292, *in* U. Eggli (ed.). Illustrated Handbook of Succulent Plants Vol. I. Monocotyledons. Springer, Heidelberg,.